b.) Remarks

Claims 1, 3-5, 7 and 9-11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kanzaki (*Journal of Bioscience and Bioengineering*, Vol. 89 (2000) 602-05) in view of Yokozeki (WO 2003/010189). Claims 1, 3-5, 7 and 9-11 also stand rejected as being obvious over this art in further view of Takeuchi (*International Journal of Systematic Bacteriology*, Vol. 48 (1998) 739-47).

This rejection is respectfully traversed. Prior to setting forth their bases for traversal, however, Applicants would briefly like to discuss the salient features of the present invention and *inter alia* its patentable nature over the prior art.

As the Examiner is well-aware, the present invention relates to a process of producing a high yield dipeptide from diketopiperazine. In the present invention, such is accomplished using the microorganism of the genus Microbacterium.

The Examiner states Kanzaki teaches using Arthrobacter and coryneform rod bacteria to produce a dipeptide from a diketopiperazine. Kanzaki does not teach use of the Microbacterium but such is said to be obvious in view of Yokozeki. Yokozeki shows the Microbacterium can produce dipeptides from amino acids.

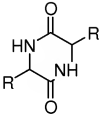
The basis of the rejection is set forth at page 5, lines 19-21, wherein

> it was further known that members of the Microbacterium genus were capable of producing the dipeptide alanylglutamine, as taught by Yokozeki.

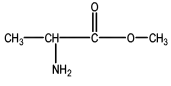
Respectfully submitted, this is entirely off-point. Yokozeki teaches only that microorganisms of the genus Microbacterium can be used to produce alanylglutamine from L-alanine methylester and L-glutamine. Yokozeki suggests too, to those in this art,

only that Microbacterium can possibly synthesize other dipeptides as well from L-alanine methylester and L-glutamine. However, there is no suggestion or logic in any of the cited art to think Microbacterium can use diketopiperazines as substrate.

The ability to produce alanylglutamine from L-alanine methylester and L-glutamine is completely different from the ability to produce alanylglutamine from diketopiperazine. Diketopiperazines are a class of cyclic organic compounds that result from peptide bonds between two amino acids to form a lactam. Their general structure is



L-alanine methylester is not a diketopiperazine and has the entirely disparate structure



As seen, L-alanine methylester does not have two amino acids, does not have peptide bonds and is not a lactam.

Thus, an ordinary person skilled in the art would not think that a microorganisms has an ability to produce dipeptide from some vastly different substrate such as diketopiperazine, even knowing in advance the microorganism has the disparate ability to form dipeptides from L-alanine methylester and L-glutamine. Instead, that

discovery was Applicants' and Applicants' alone. It is simply not possible to substitute Yokozeki's Microbacterium into Kanzaki's process using a diketopiperazine substrate that Microbacterium was not known to assimilate. Doing so was Applicants' discovery.

Nor is this deficiency remedied by Takeuchi, which simply teaches the species Microbacterium luteolum.

In view of the above amendments and remarks, Applicants submit that all of the Examiner's concerns are now overcome and the claims are now in allowable condition. Accordingly, reconsideration and allowance of this application is earnestly solicited.

Claims 1 and 3-11 remain presented for continued prosecution.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

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